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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,383	04/13/2006	Yuichi Takamine	36856.1437	8488

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EXAMINER

SUMMONS, BARBARA

ART UNIT	PAPER NUMBER
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2817

NOTIFICATION DATE	DELIVERY MODE
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04/17/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JKEATING@KBIPLAW.COM
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Office Action Summary	Application No. 10/595,383	Applicant(s) TAKAMINE, YUICHI	
	Examiner BARBARA SUMMONS	Art Unit 2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 and 25 April 2006 (pre-amends.).
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-33 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 and 25 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/13/06</u> | 6) <input type="checkbox"/> Other: _____ |

EX PARTE QUAYLE ACTION

Drawings/Specification

1. The drawings were received on 13 April 2006. These drawings are Approved.
2. The substitute specification filed 25 April 2006 has been entered and the prior substitute specification filed 13 April 2006 has not been entered as requested by Applicants (see page 3 of 4 of the 4/25/06 amendment).

Ex parte Quayle

3. This application is in condition for allowance except for the following formal matters:

In the claims:

4. Claim 20, 22, and 30 are objected to because of the following informalities:

In each of claims 20, 22 and 30, on lines 1-2, it appears that "a balanced terminal and first and second unbalanced terminals" should correctly be - - an unbalanced terminal and first and second balanced terminals - - (see e.g. each of claims 20, 22, and 30 at lines 7-9 and the other correct independent claims).

In claim 20, lines 10-14 are poorly worded and barely understandable. The Examiner believes the intended meaning to be - - in an area where the first to third IDTs are adjacent to one another, the respective IDTs have narrow pitch electrode finger sections and an electrode finger pitch of the narrow pitch electrode finger section is less than an electrode finger pitch of a main portion of [the pitch electrode finger

section of] the respective IDT [provided with narrow pitch electrode fingers] - -. Note that “the pitch electrode finger section” on line 13 lacks antecedent basis in the claim and is oddly worded. The phrase “the pitch electrode finger section” also appears on lines 21-22, so this perhaps should be reworded as well.

The same poorly worded sections also appears in claim 22, on lines 10-14 and 21-22, and in claim 30, on lines 9-13.

Appropriate correction is required.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 25 USPQ 74, 453 O.G. 213, (Comm’r Pat. 1935).

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Allowable Subject Matter

4. The following is a statement of reasons for the indication of allowable subject matter:

The closest prior art of record is considered to be Nakamura et al. U.S. 2004/0095207, which is close to claim 20 in that, in Fig. 10 Nakamura et al. shows a SAW filter with the pitch P1' in the narrow pitch finger section of the second center IDT connected to an unbalanced output being greater than the pitch P2' ($P1' > P2'$ see section [0214]) in the narrow pitch finger section of the first and third outer IDTs that are disclosed as connected to two balanced input terminals (see section [0218]), wherein providing such balanced inputs via phase reversed first and third IDTs would have been

obvious (see Kawakatsu JP 60204781 cited by Applicant). However, Nakamura et al. does not disclose how many electrode fingers K1 and K2 are in the portion of the respective IDTs other than the narrow pitch finger sections such that $1.12 \leq K1/K2 \leq 1.65$, and also does not disclose how many electrode fingers are in the narrow pitch finger sections. Even if the narrow pitch finger sections are considered to all have the same number of fingers, because the center IDT has two narrow pitch finger sections while the outer IDTs only have one narrow pitch finger section, it cannot be surmised that simply because the center IDT as a whole has more electrode fingers than the outer IDTs (see section [0208]) that the recited equation will be satisfied once the narrow pitch portions are subtracted.

Regarding other independent claims, the prior art of record is not considered to disclose or fairly suggest a SAW balanced-type filter having each and every one of the recited features including either some or all of: the specified relation of two SAW filter sections (see e.g. claim 16, lines 5 and 11); the relation of the pitch of the narrow pitch finger section in IDT connected to the unbalanced terminal to that in the IDTs connected to the balanced terminals $P1 > P2$ (see e.g. claim 16, lines 24-34); the ratio of the number of non-narrow electrode fingers in the IDT connected to the unbalanced terminal to that in the IDTs connected to the balanced terminals $1.12 \leq K1/K2 \leq 1.65$ (see claim 16, lines 27-35); and $K1n = K2n$ (see e.g. claim 18, the third from last line thereof), with K1n and K2n being the numbers of electrode fingers in the narrow pitch sections of the IDTs connected to the unbalanced terminal and unbalanced terminals, respectively; and $P1 \neq P2$ and $N1 < N2$ (see e.g. claim 28, the last three lines) with P1, P2

and N1,N2 referring to the pitch and number of electrode fingers, respectively in the narrow pitch electrode finger sections of the IDTs connected to the unbalanced terminal and balanced terminals, respectively (see claim 28, lines 24-30).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nakamura et al. U.S. 2004/0095207 was discussed in detail above and the Japanese equivalent was cited by Applicant.

Ouchi et al. U.S. 2004/0201435 discloses a balanced/unbalanced SAW filter having multiple filter sections, wherein at least one of the number and the pitch of electrode fingers in narrow pitch portions in the first stage filters 501 and 503 (cover figure) connected to the unbalanced terminal 539 is different from that in the second stage filters 502 and 504 connected to the balanced terminals (see the abstract).

Takamine U.S. 2002/0000898 discloses a SAW filter wherein the pitch in the narrow pitch electrode finger portions is different in the IDTs on each side of the center IDT (see the abstract).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BARBARA SUMMONS whose telephone number is (571)272-1771. The examiner can normally be reached on M-Th, M-Fr.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bob Pascal can be reached on (571) 271-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

bs
April 13, 2008

/Barbara Summons/
Primary Examiner, Art Unit 2817